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PC EMULATOR

INSTALLATION LEAFLET

PC Emulator

Installation Leaflet

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Introduction

The PC Emulator installation leaflet

This leaflet explains how to use the PC Emulator. It is not intended to be a DOS guide; the documentation supplied with the DR-DOS pack covers this aspect. The PC Emulator is designed to turn a 1Mbyte (or greater) computer into a system similar to that of an IBM PC or clone.

To use the PC Emulator, you require at least a 1Mbyte computer. This can be a 305 (upgraded to 1Mb), 310, 440, 400/1 series, A3000 or RISC iX system.

The emulator consists of two major parts:

- a PC environment emulator
- a DOS operating system.

The distinction between the two is hidden. The minimum amount of memory necessary to use the emulator is 1Mbyte. This gives you sufficient RAM for DR-DOS, applications and data. On a larger system the amount of memory available increases to the maximum of 640K. The version of DR-DOS supplied is version 3.

Conventions used in this guide

The following conventions are applied throughout this guide:

Specific keys to press are denoted as `Delete` , `Ctrl` , etc.

For example, `Ctrl Y` means hold down the `Ctrl` key and press and release the `Y` key.

Text you type on the keyboard and text that is displayed on the screen appears as follows:

```
PRINT "Hello"
```

After entering any text, press ↵ (*Return*) to tell the computer that you have completed the line and that you want the computer to act upon it.

Installation

The RISC OS !PC application directory

The PC Emulator disc in this pack provides a !PC application directory for RISC OS users. To start the emulator, simply double-click on the !PC icon from the desktop. Note that you cannot subsequently leave the emulator and return to the desktop, so you **must** first make sure that you have saved any unsaved work you were doing using the desktop. When you finish using the emulator, press the reset button to return to RISC OS.

The PC Emulator comprises of the following:

- the PC Emulator disc
- the DR-DOS operating system pack (which includes the DOS disc).

Floppy disc installation

1 Insert the Emulator disc into the floppy drive and click on the floppy icon. This displays the floppy directory.

2 Double click on the !PC icon.

After a while the following message appears:

```
Acorn PC Emulator, (c) Acorn 1990
Insert  DOS boot disk and press any key
```

3 Replace the Emulator disc with the DOS Boot disc and press the space bar. DR-DOS boots itself in and displays the installation start-up page.

Installing DR-DOS on a floppy disc.

DR-DOS installation consists of a number of screens to read and follow. If at any time during the installation you make a mistake you can press Esc to go back to the previous screen or F10 to stop the installation. Note: You will need one blank DOS formatted floppy disc on which your working copy of DOS will be created.

This installation procedure assumes that you are setting up DR-DOS for the first time. If you wish to alter your set-up, refer to the DR-DOS documentation pack.

1 At the DR-DOS Welcome screen press ↵ when you have read the screen.

2 If you have a hard disc, use the down arrow key to select the floppy disk A:, then press ↵. If you just have a floppy disc press ↵.

3 Make sure that you have your blank formatted disc ready, press ↵.

4 The country and keyboard settings need to be redefined. Press the up arrow to highlight the `Change country and/or keyboard` option, then press ↵.

5 Select United Kingdom as the country by pressing the up arrow key to highlight the `United Kingdom (044)` option, then press ↵.

6 Select the United Kingdom keyboard by pressing the up arrow key to highlight the `United Kingdom English` option, then press ↵.

7 Press the up arrow key and then press the spacebar to select `YES`. This selects the `Enhanced keyboard` option. Press the ↵ key twice.

8 Make sure that the selected settings are correct. At this stage you can go back and correct them if necessary. If they are correct press ↵ to continue.

9 You can at this stage set up further parameters. Refer to the DR-DOS documentation for full details. However at this stage you should accept the default setup by using the up arrow key to highlight the '`Accept default and go directly to install`' statement, then press ↵.

10 Press ↵ to continue with the installation.

11 At the prompt, remove the DR-DOS disc and insert your blank disc. Press ↵ to continue with the installation.

12 When prompted, swap your blank disc with the DR-DOS disc and press ↵ to continue with the installation. You may need to repeat steps 11 and 12 several times.

13 Once the system is installed re-boot the PC Emulator by holding down the `Ctrl` and `Alt` keys and pressing and releasing the `Delete` key.

You now have a complete DOS system installed on your floppy disc.

To run the emulator double click on the !PC application on your emulator floppy disc, then at the `Insert DOS Boot disc` prompt, put the working copy of the DR-DOS disc you have just made into the drive and press the space bar.

Hard disc installation

If your computer is equipped with a hard disc it is possible to use this with the PC Emulator. A partition is created on the hard disc which is then exclusively used for DOS files.

Installing the emulator on a hard disc (including SCSI)

1 Insert the Emulator disc into the floppy drive and click on the floppy icon. This displays the floppy directory.

2 Select the !PC application directory, and *either* !ADFSdisc (if you have a standard hard disc fitted) *or* !SCSIdisc (if you have a SCSI hard disc fitted).

3 Drag them together from the distribution disc to **any** convenient directory on your hard disc. (They must stay in the same directory.)

4 Double click on the !xxxxdisc application, to create the hard disc partition that the emulator will use. Enter the size of partition that will fit your needs. The partition will appear as the file $.PC.Drive_C.

Installing DR-DOS on a hard disk

DR-DOS installation consists of a number of screens to read and follow. If at any time during the installation you make a mistake you can press Esc to go back to the previous screen or F10 to stop the installation. If you stop the installation you must delete your $.PC.Drive_C (using RISC OS) and start the installation again.

This installation procedure assumes that you are setting up DR-DOS for the first time. If you wish to alter your set-up, refer to the DR-DOS documentation pack.

1 At the DR-DOS Welcome screen press ↵ when you have read the screen.

2 Press the down arrow to select `Yes` and press ↵ to run FDISK.

3 Type `Y` to initialise the disc.

4 Type `1` to create a DOS partition.

5 Type `1` to create a primary partition.

6 Type `Y` to start partitioning.

7 Enter a disc label (if you want to) then press ↵.

8 Press `Esc` to leave the FDISK utility.

9 When you see the message:
`The operating system needs to be reloaded`
`Insert a system disk into A: and strike a key`
Put your DR-DOS disk into the floppy drive and press any key.

10 You are back at the Welcome screen, press ↵.

11 Press ↵ to select the hard disc partition C:

12 The country and keyboard settings need to be redefined. Press the up arrow to highlight the `Change country and/or keyboard` option, then press ↵.

13 Select United Kingdom as the country by pressing the up arrow key to highlight the `United Kingdom (044)` option, then press ↵.

14 Select the United Kingdom keyboard by pressing the up arrow key to highlight the `United Kingdom English` option, then press ↵.

15 Press the up arrow key and then press the spacebar to select `YES`. This selects the Enhanced keyboard option. Press the ↵ key twice.

16 Make sure that the selected settings are correct. At this stage you can go back and correct them if necessary. If they are correct press ↵ to continue.

17 Press ↵ to the question '`Do you want all of your DR-DOS files replaced?`'

18 You can at this stage set up further parameters. Refer to the DR-DOS documentation for full details. However at this stage you should accept the default setup by using the up arrow key to highlight the '`Accept default and go directly to install`' statement, then press ↵.

19 Once the system is installed re-boot the PC Emulator by holding down the `Ctrl` and `Alt` keys and pressing and releasing the `Delete` key.

You now have a complete DOS system installed on your hard disc. From now on, you do not need the floppy discs. To run the emulator double click on the !PC application on your hard disc .

At the Insert DOS Boot disc prompt, do not put any floppy disc in the drive, just press the space bar. DOS will be booted from the hard disc.

You can use drive C (the hard disc) in the same way as drives A or B.

Delete the !xxxxdisc application from the hard disc, as it is no longer needed.

Utility summary

There are two utilities present on the DOS Boot disc that enable the transfer of files from DOS to ADFS format discs and vice versa.

Getfile

The utility Getfile allows the transfer of files from ADFS to DOS and has the following syntax:

```
GETFILE <ADFS source filename> <DOS destination filename>
```

For example:

```
GETFILE :1.LETTERS.BANK A:\LETTERS\BANK.DOC
```

Putfile

The utility Putfile allows the transfer of files from DOS to ADFS and has the following syntax:

```
PUTFILE <DOS source filename> <ADFS destination filename>
```

For example:

```
PUTFILE A:\SHEETS\ACCOUNTS.SHT :1.SHEETS.ACCOUNTS
```

Using Getfile and Putfile on single drive systems

With both these utilities, no support is given for single drive systems. To make use of Getfile and Putfile, the user must use a second drive. This can be either a second floppy drive, a hard disc partition or a memory disc. On a single drive system, the memory disc is the only way of utilising Getfile and Putfile.

To create a memory disc

1 Start up the PC Emulator as described earlier in this booklet.

2 Make sure that the DR-DOS boot disc is unprotected.

3 From the A> prompt type:

```
A>EDITOR CONFIG.SYS ↵
```

This starts up the text editor to enable you to change the start up configuration of the PC Emulator.

4 If the file does not exist, respond 'Y' to create the file.

5 Type:

```
DEVICE=VDISK.SYS
Ctrl Kx
```

6 Re-boot the PC Emulator by holding down the Ctrl and Alt keys and pressing and releasing the Delete key.

The screen will clear and you will get a message saying that a memory disc has been created on drive C.

Copying files with the memory disc

With the memory disc created, you can now start to copy files between ADFS and DOS. First copy the Getfile or Putfile programs into the memory disc using:

```
A>C: ↵
C>COPY A:PUTFILE.EXE C: ↵
C>COPY A:GETFILE.EXE C: ↵
```

If you are getting files from ADFS, you can now put the ADFS disc into the drive and type, for example:

```
C>GETFILE :0.MYFILE MYFILE.DOC
```

If you are putting files onto an ADFS disc, first copy the files from your DOS disc into the memory disc and then use Putfile to transfer them to the ADFS disc.

Removing the memory disc

When you have finished using the memory disc, you can edit your config.sys file so that it does not always create one.

1 With the unprotected DOS boot disc in the drive, type:

```
A>EDITOR CONFIG.SYS ↵
```

2 Move the flashing cursor to the start of the line containing 'DEVICE=VDISK.SYS'

3 Type:
Ctrl Y

4 Type:
Ctrl Kx

5 Re-boot the PC Emulator by holding down the Ctrl and Alt keys and pressing and releasing the Delete key.

You can now reboot the system, and it will not create the memory disc.

Non-standard configurations

Non-standard hard disc installation

The standard hard disc installation procedure assumes that:

- your hard disc configuration is a standard one – ie your first hard disc is Drive 4, and your second (if fitted) is Drive 5
- you want the partition to be stored in $.PC.Drive_C .

If either of these assumptions is wrong, then you will have to alter one or two files:

- the !RunImage file in the !xxxxdisc application directory, which is a BASIC program that creates a single hard disc partition
- the !Run2 file in the !PC application directory, which is a text file that tells the PC Emulator where to find the hard disc partition(s).

You will find full guidelines at the start of the !RunImage file, which detail any changes you will have to make to either of these files.

Increasing available RAM by disabling sound

The amount of RAM available to the emulator on a 1Mb system can be slightly increased if you do not require sound. Edit the file !PC.GenBoot.!Modules, removing the comment bars from the SoundDMA, SoundChannels and WaveSynth modules; then resave the file.

Configuring the floppy disc drive head step rates

This version of the PC Emulator reads the configured floppy disc drive head step rate settings from CMOS RAM. If you have more than one floppy disc drive, you should ensure that the configured step rates are correct. Refer to the documentation of the `*CONFIGURE STEP` command in the *RISC OS User Guide* for further information.

Bibliography

For further information concerning DOS, you may find the following books of interest:

ABC's of MS-DOS by A R Miller, published by Sybex.

IBM PC: An introduction to the operating system, BASIC programming and application by L J Goldstein, published by Prentice-Hall.

IBM PC-DOS handbook by R A King, published by Sybex.,

The power of running PC/DOS: Includes versions 3.2 by C Siechert and C Wood, published by Management Information Source.

Understanding MS-DOS by K O'Day, published by Sams.